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Applicant's arguments filed March 5, 2008 have been fully considered but they are not persuasive. The amendment has been entered. Claims 1-3, 5-12 and 70 are under examination.

Deborah Crouch, Ph.D. AU 1632 is now the examiner prosecuting this application.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-12 and 70 remain rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,284,539 (Bowen, of record) in view of Takeshima et al (1994) Neurosci., Vol. 60, pp. 809-823 (of record), for reasons set forth in the office actions mailed July 29, 2005, April 19, 2006 and September 5, 2007.

Applicant argues neither Bowen nor Takeshima, alone or together, suggest co-culturing Type I astrocytes of the ventral mesencephalon secrete a factor or factors that can induce a dopaminergic cell fate in Nurr overexpressing neural stem cells or neural progenitor cells. Applicant argues Bowen teaches the overexpression of Nurr in CNS stem cells to induce dopaminergic neurons. Applicant argues Bowen suggests Nurr 1 directed a small portion of the neural stem cells to a dopaminergic fate. Applicant argues the method of the claims allows for 70% of the cells expressing Nurr to become dopaminergic cells.

Applicant argues Bowen teaches away from the claimed invention as Bowen states Nurr 1 is used in place of soluble proteins to induce dopaminergic cell development. Applicant argues Bowen cultures the end product, dopaminergic cells, with striatal astrocytes, not neural stem cells.

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Applicant argues Takeshima does not provide the proper teachings as the reference teaches the co-culture of dopaminergic neurons with Type 1 astrocytes for the selective survival of TH+ neurons versus all other neuronal types. Applicant argues Takeshima does not teach the co-culture of neural stem or progenitor cells on Type 1 astrocytes to induce differentiation of the stem or progenitor cells into dopaminergic neurons.

These arguments are not persuasive.

The enhanced differentiation of dopaminergic neurons from neural stem or progenitor cells using applicant's method is not in all the claims. Further, Bowen, figure 4A, shows more than 70% of the cells overexpressing Nurr1 are induced to a dopaminergic neuronal fate.

The artisan would have been motivated to combine Bowen and Takeshima to provide support for newly produced dopaminergic neurons as evidenced by Takeshima. The presence of Type 1 astrocytes would, in view of Takeshima, obviously support the dopaminergic neurons as they are differentiated from Nurr1 overexpressing cells of Bowen.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 5-12 and 70 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 states a "significant percentage" of the cells that overexpresses Nurr1 .." however, there is no definition of "significant percentage" so that the metes and bounds of the claim are known.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Crouch, Ph.D. whose telephone number is 571-272-0727. The examiner can normally be reached on M-Fri, 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Paras can be reached on 571-272-4517. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Deborah Crouch, Ph.D./
Primary Examiner, Art Unit 1632

June 25, 2008